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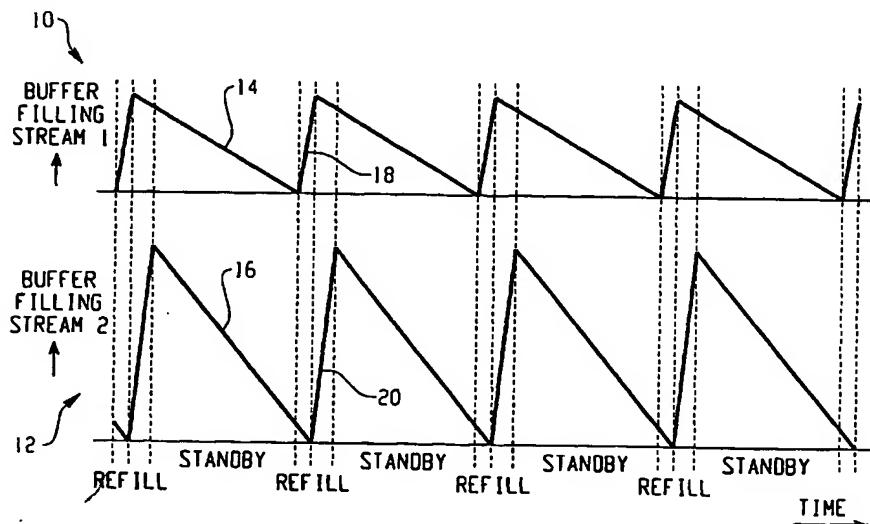
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(54) Title: ENERGY EFFICIENT DISK SCHEDULING FOR MOBILE APPLICATIONS: ADAPTIVELY EXTENDING THE DISK STANDBY TIME



(57) Abstract: A total amount, M, of memory is allocated over streaming data buffers (86). The memory is partitioned over a set of streams (88), each stream being given a partitioned amount of buffer memory. Scheduling is repeatedly performed during each filling/emptying cycle. The scheduling includes: spinning up a storage disk (80), filling/emptying each stream buffer by reading/writing from/to the storage disk until the respective stream buffer is full/empty, determining an earliest next spinning up time, putting the storage disk in standby mode, spinning down the storage disk, re-determining, at or just prior to the earliest next spinning up time, a new earliest spinning up time based on current buffer fullness, iteratively re-determining the new earliest spinning up time until the time is within a predetermined closeness to the previous time, or within a predetermined closeness to the current time, and waiting until the next earliest spinning up time, or just prior to that time.

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